

**California Regional Water Quality Control Board
Santa Ana Region
December 19, 2001**

ITEM: 9

SUBJECT: Order No. 01-99, Waste Discharge Requirements for Sewage
Collection Agencies in Orange County Within the Santa Ana Region

INTRODUCTION:

There is a significant public health threat from the microbial pollution problems in ocean waters along the Orange County coast. Orange County has some of the most valuable beaches in the country, not only because of the large number of visitors, but also because of the revenue these visitors generate for the local businesses and the municipalities. From Seal Beach to San Clemente, there are approximately 42 miles of coastal beaches and a total of 124 miles of coastal and bay beaches. This translates to 45,260 available beach mile days per year (beach mile days=miles of beach X number of days). Approximately 60% of the beach mile days in Orange County are within the Santa Ana Region, with the remainder in the San Diego Region.

Since 1999, there have been a total of 146.8 beach mile days of beach water postings (warning) and closures (access prohibited) in Orange County. Between January 1, 2000 and August 31, 2001, the Orange County Health Officer closed portions of Seal Beach, Sunset Beach, Bolsa Chica State Beach, Huntington Harbour, Huntington City Beach, Huntington State Beach, Newport Beach, Newport Slough, and Newport Coast to body contact recreation on 31 occasions. All storm drain outlets into the ocean are posted, warning the public that the water may be contaminated. In addition, the Health Officer posts the area where testing indicates that the water quality objectives for bacteria are exceeded.

To date, studies have indicated that beach water closures and postings cannot be linked to any single source. There are a number of suspected or potential sources that cause water quality impairment of ocean waters in Orange County. These include sewage spills and leaks, urban runoff, Orange County Sanitation District's (OCSD) ocean outfall, AES power plant discharge, vessel pump out stations, septic systems, coastal wetlands and marshes and wildlife. However, the 31 beach water closures indicated above were all due to sewage spills or leaks that reached or threatened to reach ocean waters.

The Regional Board currently regulates urban runoff, OCSD's ocean outfall, and the AES power plant discharges. The sanitary system overflows (SSOs, sewage spills and leaks) are currently not regulated by the Regional Board. According to the United States Environmental Protection Agency (USEPA), "Final Report, Sanitary Sewer Overflow (SSO) Workshop", August 1995, workshop participants

agreed that most dry weather SSOs were preventable and can be eliminated, and most wet weather related SSOs can be significantly reduced by adequate management, operations, and maintenance programs. Where wet weather SSOs cannot be eliminated, cost-effective storage and treatment options are available.

Based on the finding that most beach water closures in Orange County are due to SSOs, and the fact that most of these SSOs are preventable, this order proposes to regulate all sewerage agencies in Orange County that are within the Santa Ana Regional Board's jurisdiction. It is anticipated that upon implementation of the requirements specified in this order, beach water closures due to SSOs will be significantly reduced/eliminated.

BACKGROUND

During the summer of 1999, a 1 to 5 mile section of Huntington Beach was closed to body contact recreation. As part of the investigation of the possible causes of the beach water pollution, the Executive Officer issued a Cleanup and Abatement Order requiring the City of Huntington Beach to conduct an investigation of its sanitary sewers and to determine the impact of any leaking sewers on the microbial pollution problems in the ocean waters. The Cleanup and Abatement Order also required the City to develop and implement a plan for repairing leaking sewers throughout the City.

The City of Huntington Beach completed the investigation of the sewer system and concluded that the leaking sewers had not contributed to the beach water pollution problems at Huntington Beach, or adversely impacted ground water quality. However, these investigations and other similar studies indicated that sewage leaks and spills from deteriorated sewer lines and/or sewer lines that are not properly maintained could be a significant source of microbial contamination in the nearshore zone of the ocean.

There are 27 sewage collection agencies within the Santa Ana portion of Orange County. Many of these collection systems have had sewage spills that resulted in beach water closures. Table 1 below lists 31 SSOs that resulted in beach water closures, the cause of the spill, and the amount of the spill, the area impacted, and the responsible party. Over 100,000 gallons of sewage (excluding secondary treated wastewater) was spilled into nearshore ocean waters between January 2000 and August 2001. During the same period there were a total of approximately 250 sewage spills. Most of these spills did not result in a beach water closure; but many of the spills reached other surface water bodies within the Region.

Table 1: Ocean, Bay and Harbor Water Closures January 2000-August 2001 (Monica Mazur, OCHCA August 2001)					
	Date Closed	Date Opened	Ocean, Bay, Harbor Area Closed	Agency/Reason (PPO=Private Property Owner)	Amount Spilled*
1.	1/2/00	1/5/00	Harbor Patrol Beach, China Cove & Rocky Point Beach, Newport Bay, Newport Beach	City of Newport Beach/Line Blockage	~1500 gallons/sewage
2.	1/4/00	1/6/00	Trinidad Beach and Westchester Docks, Huntington Harbour, Huntington Beach	Westchester Bay-Sea Gate Lagoons (PPO)/Line Blockage	Unknown/sewage
3.	1/7/00	1/11/00	Arches Marina, Newport Bay, Newport Beach	Park Superior Health Care (PPO)/Line Blockage	~240 gallons/sewage
4.	2/22/00	2/28/00	San Gabriel River to 1/2 mile downcoast of the San Gabriel River, Seal Beach	Orange County Sanitation District/Line Blockage-possibly storm water surcharge	~1000-10,000 gallons/sewage
5.	3/19/00	3/23/00	Seal Beach Pier to Anderson Street, Seal Beach & Mother's Beach, Sunset Aquatic Marina, Peter's Landing Marina and Portofino Marina, Huntington Harbour, Huntington Beach	City of Seal Beach/Line Break	~1500 gallons/sewage
6.	4/24/00	4/27/00	San Gabriel River to 5 th Street, Seal Beach	City of Placentia/Line Blockage	~84,000 gallons/sewage 63,000 gallons recovered
7.	5/4/00	5/7/00	Bayshore Beach & Dover Shores Beaches (2 coves), Newport Bay, Newport Beach	City of Newport Beach/Line Blockage	~1000 gallons/sewage ~200 gallons recovered
8.	5/9/00	5/11/00	Talbert Channel to Orange Street, Huntington State Beach & Newport City Beach Huntington Beach & Newport Beach	Orange County Sanitation District/Pump Station Equipment Failure	~5000 gallons/sewage
9.	6/9/00	6/13/00	San Gabriel River mouth downcoast to Seal Beach Pier, Seal Beach	Orange County Sanitation District/Line Blockage	~50,000 gallons/sewage
10.	9/11/00	9/14/00	From Lido Island Bridge to 300 feet up bay of Lido Island Bridge along Lido Marina Village docks, Newport Bay, Newport Beach	Lido Marina Village/Line Break at Vessel Pump Out Facility	Unknown/sewage
11.	9/20/00	9/22/00	From west end of Balboa Bay Club Marina down bay through Bayshore's "Play Beach" and bay front, Newport Bay, Newport Beach	Balboa Bay Club/Line Blockage - possibly grease	~500-700 gallons/sewage
12.	11/13/0	11/15/00	Harbor Marina, Newport Bay, Newport Beach	PPO/Line Blockage	~105 gallons/sewage

	0				
13.	12/7/00	12/10/00	North Star Beach up bay to Jamboree Road, Newport Bay	Irvine Ranch Water District/Line Break	250,000 gal. secondary
Table 1: Ocean, Bay and Harbor Water Closures January 2000-August 2001 (Monica Mazur, OCHCA August 2001)					
	Date Closed	Date Opened	Ocean, Bay, Harbor Area Closed	Agency/Reason	Amount Spilled*
14.	12/11/00	12/14/00	"A" Dock and Harbor Patrol Dock, Sunset Aquatic Marina, Anaheim Bay, Seal Beach	Sunset Aquatic Marina (PPO)/Line Break	~5-10 gallons 2 X/day X ~5months/sewage
15.	12/28/00	12/31/00	North Star Beach, Newport Bay, Newport Beach	City of Newport Beach/Line Blockage	500-600 gallons/ sewage
16.	2/14/01	2/17/01	300 feet up coast and 300 feet downcoast of the Santa Ana River, Huntington State Beach, Huntington Beach & Newport Beach	PPO (Denny's Restaurant)/line blockage (grease & paper towels)	~100-300 gallons / sewage
17.	2/20/01	2/25/01	1000 feet up coast and 1000 feet downcoast of the Santa Ana River, Huntington State Beach, Huntington Beach & Newport Beach	Costa Mesa Sanitary District/line blockage (grease)	~1000 gallons/sewage
18.	2/21/01	2/25/01	Newport Slough, Newport Beach	Orange County Sanitation District/ suspected line break	<500 gallons/sewage
19.	3/12/01	3/15/01	300 feet up bay and 300 feet down bay of the Bahia Corinthian Yacht Club, Newport Bay, Newport Beach	PPO (Newport Medical Building)/line blockage	~1000 gallons spilled - ~700 gallons recovered/ sewage
20.	4/10/01	4/13/01	300 feet up coast and 300 feet downcoast of El Morro Creek, El Morro State Beach, Newport Coast	State Department of Parks and Recreation/line break	~25 gallons/sewage
21.	5/12/01	5/16/01	Portofino Cove and Sunset Aquatic Marina, Huntington Harbour, Huntington Beach	Anaheim Sheraton Hotel/line blockage	~2400 gallons/sewage ~100 gallons recovered
22.	5/18/01	5/21/01	Portofino Cove and Sunset Aquatic Marina, Huntington Harbour, Huntington Beach	City of Garden Grove/line break	~13,000 gallons/sewage ~10,400 gallons
23.	5/29/01	6/1/01	Balboa Bay Club "F"-"H" Docks & Orange Coast College Crew Docks, Newport Bay, Newport Beach	PPO (Balboa Bay Club)/line break (vessel pump station sewage line)	Unknown gallons/sewage
24.	6/9/01	6/12/01	Portofino Cove and Sunset Aquatic Marina, Huntington Harbour, Huntington Beach	PPO/line blockage (grease)	~1500 gallons/sewage
25.	6/27/01	6/30/01	Balboa Yacht Club docks, Newport Bay, Newport Beach	PPO (Balboa Yacht Club)/line blockage	>200 gallons/sewage
26.	7/3/01	7/5/01	San Gabriel River mouth to 4 th Street, Seal Beach	PPO ()/line blockage	~9800 gallons/sewage ~1600 gallons

					recovered
Table 1: Ocean, Bay and Harbor Water Closures January 2000-August 2001 (Monica Mazur, OCHCA August 2001)					
	Date Closed	Date Opened	Ocean, Bay, Harbor Area Closed	Agency/Reason	Amount Spilled*
27.	8/12/01	8/16/01	Sunset Aquatic Park Marina, Admiralty Drive Channel, Peter's Landing Marina & 11 th Street Beach, Huntington Harbour, Huntington Beach	City of Huntington Beach/line break (force main)	~2000 gallons/sewage
28.	8/12/01	8/16/01	Mouth of San Gabriel River to 300 feet downcoast of San Gabriel River, Seal Beach	City of Fullerton/line blockage (grease)	~6000 gallons/sewage
29.	8/23/01	8/26/01	Harbor Patrol Beach, Newport Bay, Newport Beach	Orange County Public Facilities & Resources Department/line break at vessel holding tank pump out facility	<50 gallons/sewage
30.	8/24/01	8/29/01	Crow's Nest Marina, Newport Bay, Newport Beach	PPO (Crow's Nest Marina)/line break at vessel holding tank pump out facility	<50 gallons/sewage
31.	8/30/01		City Channel at Sea Harbor and Coral Cay at Marina Bay Drive, Huntington Harbour, Huntington Beach	PPO (Jewel Land Properties)/line blockage	~500 gallons/sewage

*Amount Spilled: amount spilled - amount recovered = release amount.

CAUSES FOR SEWER SYSTEM OVERFLOWS

Table 1, above, also shows some of the causes of the reported SSOs. The majority of the SSOs are caused by pipe blockages due to grease buildup, debris, and roots. Other causes include sewer line damage due to flood, manhole structure failures, vandalism, pump station failures, pipe breakage, inadequate capacity, power outages, contractor caused damages, inflow and infiltration, and sewer systems that are not properly designed, constructed, operated, and/or maintained.

COLLECTION SYSTEM EVALUATION CRITERIA

In determining whether a sewage collection system is properly operated and maintained, staff used a report prepared by the American Society of Civil Engineers (ASCE) for USEPA in June 2000 entitled, "Protocols for Identifying Sanitary Sewer Overflows". This report is based on a survey of 14 sewage collection agencies from across the country to evaluate sewage spills, causes of spills, and operations and maintenance practices. The 14 sewer systems surveyed were chosen because they had a reputation for having good operations and maintenance programs and a relatively low number of sewage spills. The agencies were surveyed to determine what each agency did to prevent sewage spills and to determine how they responded to spills.

Table 2, below, summarizes some of the data collected for the ASCE report including the average and the range for some of the survey parameters.

Table 2: Summary of Data Collected by ASCE (June 2000)

Criteria	Average	Maximum	Minimum
Population Density per/sq. mi.	282.3	468.8	176.4
Age of Collection System (%<30 yrs.)	37.3	63	1.0
Average Daily Flow, gcd	170	297	86
% of System >24 in. diameter	10.9	40	0.5
Mile Sewer/Pump Station	84.7	316.7	3.4
% System Industrial/commercial	17.9	80	3
SSO Wet Weather Events			
-Pipe Failures/100 miles of sewer/yr	1.40	8.54	0
-Manhole Overflows/100 miles/yr	2.02	7.46	0
-Basement backups/100 miles/yr	4.76	30.28	0
-Pump Station Failures/100 miles/yr	0.34	1.64	0
-Pump station failures/pump station/yr	0.31	1.63	0
SSO Dry Weather Events			
-Pipe Failures/100 miles/yr	0.88	6.03	0
-Manhole overflows/100 miles/yr	2.14	7.46	0
Basement backups/100 miles/yr	2.3	17.01	0
-Pump station failures/yr	0.5	2.03	0
Routine Maintenance Frequency			
-%cleaned/yr	22.6	38.8	6.4
-%root treated/yr	5.2	34.7	0
-Main stoppages cleared/100 miles/yr	41.4	162.3	0
-Services stoppages cleared/100 miles/	104.3	420.0	0
-Pump Station Service/PS/yr	141.0	443.5	0
-Monitoring sites/100 mi./yr	12.0	62.5	0.4
-% manhole inspected/yr	15.5	48.5	0.1
-Dye test/100 miles/yr	5.9	30.3	0.8
-% CCTV Inspected/yr	0.4	1.9	0.1

As part of an investigation to determine the causes of the sewage spills in Orange County, staff conducted audits of a number of sewage collection agencies within Orange County. Staff evaluated the operations, management, capacity, reporting procedures, spill response procedures, and maintenance records of the sewage collection agencies audited for this purpose. The investigations indicated that there were sewage spills that were not properly reported by some of the sewage collection agencies. These results were then compared to the ASCE criteria.

SEWAGE COLLECTION AGENCIES IN ORANGE COUNTY

The OCSD is the major sewage collection agency in Orange County. The OCSD owns and operates two sewage treatment plants, one in Fountain Valley and the second one in Huntington Beach. Some of the treated water from the OCSD facility is further treated at the Orange County Water District's Water Factory 21 and reinjected to create a seawater intrusion barrier. The remaining treated water from the sewage treatment plants is discharged through an ocean outfall located approximately 4.2 miles from shore at Huntington Beach. The Irvine Ranch Water District (IRWD) operates a sewage treatment plant in Irvine. Other agencies listed below only operate sewage collection systems. Except for El Toro Water District, all other sewage collection systems listed below are tributary to the OCSD system.

Table 3, below, lists each of the sewage collection agencies in Orange County within the Santa Ana Region, and some basic characteristics of each system, such as the population served, service area, miles of sewers, etc. OCSD operates major trunk line sewers throughout each service area that collects sewage from each system for treatment at their two treatment plants. The agencies listed in Table 3 collect approximately 240 million gallons per day of wastewater, from over 2 million people, spread over more than 460 square miles. The size of the sewage collection systems range from a service population of 4,000 to more than 300,000 people, and from less than 3 miles of sewers to more than 500 miles of sewers. The entire sewage collection system includes almost 5,000 miles of sewers, and over 100 pump stations.

Table 3: Sewage Collection Agencies in Orange County within the Santa Ana Region (OCSD, 2000)

City/Sanitation District	Population	Service Area Square Miles	Gravity Sewers Miles	Force Main Feet	Pump Stations No.
Anaheim	328,000	49.76	503	0	0
Brea	36,000	23.1	108.5	300	1
Buena Park	78,280	10.29	250	0	0
Costa Mesa S.D.	109,000	15.7	321	24813	20
Cypress	49,600	7.2	87	2000	1
El Toro Water District	N/A	N/A	N/A	N/A	N/A
Fountain Valley	58,000	10	130	100	1
Fullerton	127,000	22	283.5	0	0
Garden Grove	165,196	17.8	327	9150	3
Huntington Beach	201,000	28	580	34320	28
Irvine	See IRWD				
Irvine Ranch W.D.	69728	123	515.05	79279	8
La Habra	58,974	7.5	105.95	0	
La Palma	16400	2	25	0	0
Los Alamitos	See Rossmoor				
Midway City S.D.	90,000	10.25	168		4
Newport Beach	70,000	24	210	106,000	20
Orange	129,000	23	309	600	2
Placentia	46,888	7	23	0	0
Los Alamitos/Rossmoor S.D.	24,780	6.25	54	0	0
Santa Ana	312,595	27	450	100	2
Seal Beach	25,098	10.72	45	19,079	9
Stanton	37,400	3	55	600	1
Sunset Beach S.D.	4,000	0.25	2.67	750	2
Tustin	68,316	12.59	51.52	0	0
Irvine Business Complex			24.18	2,794	3
Villa Park	6,782	2.1	30	250	1
Westminster		See Midway City S.D.			
Yorba Linda	63,000	9.3	72.6	450	1
Yorba Linda W.D.	54,376	11	138	529	1
Total	2,317,620	463	4,869	281,114	108

The OCSD's annual Operations and Maintenance Survey report provides information about the system components, number of sewage spills, money spent on O&M and capital improvement, and other factors. Although these reports provide a fairly good picture of each sewage collection system, there are differences in how each agency responded to the survey questions and differences in operations within each system that may skew any statistical analysis of the data. For example, some agencies report all sewage spills and others only report spills greater than 1,000 gallons. Some agencies do not report sewage spills at all. Some agencies report budget information as a total amount

and others break down costs based on O & M, capital improvement, and pump station maintenance, as requested by the survey. However, the OCSD annual O&M survey results do provide basic information on overall performance of each sewer system and it could be used as a tool to identify areas that need improvement.

Table 4, below, summarizes the information on SSOs from the OCSD annual O&M survey. Only 8 sewage spills greater than 1,000 gallons and 150 SSOs less than 1,000 gallons were reported. The overall results are comparable to the ASCE survey results summarized in Table 2. Again this comparison may not be accurate as some of the collection agencies did not report any of the sewage spills in their jurisdiction

Table 4: Number of Sanitary Sewer Overflows during 2000 in Orange County (OCSD, 2000) (for Collection Systems Tributary to OCSD)

City/Sanitation District	Sewage Spills <500 gallons	Sewage Spills 500-1000 gal.	Sewage Spills 1,000-10,000 gal.	Sewage Spills >10,000 gal.	No. of Spills per 100 mi.
Anaheim	23	5	3	0	6.16
Brea	1	0	0	0	0.92
Buena Park	0	0	0	0	0.00
Costa Mesa S.D.	14	0	2	0	4.98
Cypress	0	0	0	0	0.00
Fountain Valley	0	0	0	0	0.00
Fullerton	21	13	0	0	11.99
Garden Grove	15	3	1	0	5.81
Huntington Beach	7	3	0	0	1.72
Irvine					
Irvine Ranch W.D.	0	0	0	0	0.00
La Habra	3	0	0	0	2.83
La Palma	0	0	0	0	0.00
Los Alamitos		W			
Midway City S.D.	12	0	0	0	7.14
Newport Beach	List not Provided				
Orange	8	0	0	0	2.59
Placentia	7	0	0	1	34.78
Los Alamitos/Rossmoor S.D.	0	0	0	0	0.00
Santa Ana	9	0	0	0	2.00
Seal Beach	0	0	0	0	0.00
Stanton	4	0	0	0	7.27
Sunset Beach S.D.	0	0	0	0	0.00
Tustin	1	1	0	0	3.88
Irvine Business Complex	0	0	0	0	0.00
Villa Park	0	0	0	0	0.00
Westminster					
Yorba Linda	0	0	0	0	0.00
Yorba Linda W.D.	2	1	1	0	2.90
Total/average	127	26	7	1	3.80

Table 5, below, summarizes the budget information provided by the sewage collection agencies in the OCSD annual O&M survey. As shown in the table, not all agencies provided budget information and audits of a limited number of these agencies by staff indicated that some of the information listed in Table 5 is not accurate.

Table 5 shows that the annual budgets for the sewer system ranges from \$1.19 to \$175 per person per year. The expenditures for operations and maintenance (O & M) and for capital improvement also vary significantly among these agencies. Comparing Table 5 with the number of sewage spills listed in Table 4 for each agency, there appears to be some correlation between the total amount spent per year on O&M and the number of sewage spills. However, due to the inaccuracies in the reporting format, these comparisons may be premature.

Table 5: Summary of Budget Information for Sewage Collection Systems in Orange County (for systems tributary to OCSD).

City/Sanitation District	Sewer O&M	Pump Station O&M	Capital Improvement	Sewer O&M	Pump Station O&M	Capital Improvement	Sewer O&M
	\$/year	\$/year	\$/year	\$/Mile	\$/PS	\$/Mile	\$/Capita/yr.
Anaheim	1845254.00			3668.50		0.00	5.63
Brea	120000.00	10000.00	150000.00	1105.99	10000.00	1382.49	3.33
Buena Park	130000.00	NA	700000.00	520.00		2800.00	1.66
Costa Mesa S.D.	1089700.00			3394.70	0.00	0.00	10.00
Cypress	136026.00		50000.00	1563.52	0.00	574.71	2.74
Fountain Valley							
Fullerton	285054.00			1005.48		0.00	2.24
Garden Grove	3859062.00		995000.00	11801.41	0.00	3042.81	23.36
Huntington Beach	779645.00	461255.00	1648510.00	1344.22	16473.39	2842.26	3.88
Irvine							
Irvine Ranch W.D.	6004858.00		1343479.00	11658.79	0.00	2608.44	86.12
La Habra	218868.00	0.00	507968.00	2065.77		4794.41	3.71
La Palma	260000.00			10400.00		0.00	15.85
Los Alamitos							
Midway City S.D.							
Newport Beach	212000.00	700000.00	550000.00	1009.52	35000.00	2619.05	3.03
Orange	188700.00			610.68	0.00	0.00	1.46
Placentia	60000.00			2608.70		0.00	1.28
Los Alamitos/Rossmoor	70000.00	0.00	50000.00	1296.30		925.93	2.82
Santa Ana	665855.00		200000.00	1479.68	0.00	444.44	2.13
Seal Beach	351000.00		1182500.00	7800.00	0.00	26277.78	13.99
Stanton	150000.00	10000.00	800000.00	2727.27		14545.45	4.01
Sunset Beach S.D.	700000.00			262172.28	0.00	0.00	175.00
Tustin	113344.00			2200.00		0.00	1.66
Irvine Business Complex	48748.00	56054.00	1354000.00	2016.05	18684.67	55996.69	
Villa Park	12500.00	4200.00	20000.00	416.67	4200.00	666.67	1.84
Westminster							0.00
Yorba Linda	119300.00	12000.00	0.00	1643.25	12000.00	0.00	1.89
Yorba Linda W.D.	64720.00		181135.00	468.99	0.00	1312.57	1.19

NEED FOR GENERAL WASTE DISCHARGE REQUIREMENTS

SSOs may cause a nuisance, cause temporary exceedances of applicable water quality standards, pose a threat to the public health, adversely affect aquatic life, and impair the public recreational use and aesthetic enjoyment of surface waters. As discussed above, most of these SSOs are preventable with proper operation and maintenance of the collection systems. Regional Board staff's audit of a number of sewage collection agencies and the information in Tables 4 and 5, above, indicate that the sewage collection agencies' operation, maintenance, spill reporting procedures, and response to spills vary widely. In certain cases, significant improvements are needed to minimize these SSOs and their adverse impacts. The proposed General Waste Discharge Requirements (WDR) prescribes uniform minimum standards for the sewage collection agencies. By issuing a General WDR to all the collection agencies in Orange County, the requirements are uniformly applied without the administrative burden of issuing individual permits.

REGULATORY BASIS

The Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) prohibits the discharge of untreated sewage to any surface water stream, natural or man-made, or to any drainage system intended to convey storm water runoff to surface water streams (Basin Plan, Chapter 5, Implementation, Page 5-5). The California Water Code (Section 13260) and the Clean Water Act (Section 402) prohibits the discharge of pollutants to surface waters without a NPDES permit. This order implements the Basin Plan prohibition (no discharge to surface waters) and therefore, is not a NPDES permit. The Basin Plan prohibition is the basis for the requirements specified in this order.

REQUIREMENTS

The order requires the sewage collection agencies to develop and implement a Sewer System Management Plan (SSMP). The SSMP should include programs and policies the agency is proposing to address capacity, management, operation, maintenance, funding, and spill response. Since grease blockage has been identified as one of the major causes of SSOs, the sewage collection agencies are also required to implement a grease and fat source control program.

RECOMMENDATION

Staff recommends adoption of Order No. 01-99 as presented, at the January 25, 2002 meeting.

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION**

TENTATIVE ORDER NO. 01-99

GENERAL WASTE DISCHARGE REQUIREMENTS

**FOR
SEWAGE COLLECTION AGENCIES IN
ORANGE COUNTY
WITHIN THE SANTA ANA REGION**

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board), finds that:

1. The following federal agencies, municipalities, counties, districts or other public bodies, which own or have responsibilities for sanitary sewer collection systems or any facilities that collect or convey untreated sewage wastewater in the portions of Orange County within the Santa Ana Region, are named as dischargers (or permittees) in this Order. Since most of these dischargers are tributary to the Orange County Sanitation District (OCSD), the OCSD may lead a steering committee for all other entities tributary to OCSD, for the purposes of complying with the requirements of this Order.

City of Anaheim	City of Newport Beach
City of Brea	City of Orange
City of Buena Park	City of Placentia
Costa Mesa Sanitary District	Rossmoor/Los Alamitos Area Sewer District
City of Cypress	City of Santa Ana
City of Fountain Valley	City of Seal Beach
City of Fullerton	City of Stanton
Garden Grove Sanitary District	Sunset Beach Sanitary District
City of Huntington Beach	County of Orange Unincorporated Area 7
City of La Palma	City of Villa Park
Irvine Ranch Water District	City of Yorba Linda
City of La Habra	Yorba Linda Water District

Orange County Sanitation District (OCSD)	Midway City Sanitation District
City of Los Alamitos	El Toro Water District
U.S. Air Force Reserve Center Los Alamitos	Joint Forces Training Base Los Alamitos
Marine Corps Air Station El Toro/Tustin	Naval Weapons Station Seal Beach

2. A sanitary sewer system is a sewage wastewater collection system including sewers, pipes, pumps, or other conveyances which convey sewage wastewater (e.g. domestic, commercial, and industrial wastewaters) to a sewage treatment plant. A sanitary sewer system overflow (SSO) is each instance of a discharge from a sanitary sewer system at any point prior to its treatment and proper disposal. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, highlines, etc.) are considered to be part of the sanitary sewer system, and discharges of sewage to these facilities are not sanitary sewer overflows, provided that sewage from these facilities is not discharged to waters of the State.
3. Sanitary sewer overflows (SSOs) consist of varying mixtures of domestic sewage, and industrial and commercial wastewater depending on the pattern of land uses in the sewage collection system tributary area. SSOs often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen demanding organic compounds, oil and grease and other pollutants. SSOs may cause a nuisance, cause temporary exceedances of applicable water quality standards when the sewage is discharged to surface waters of the State, pose a threat to the public health, adversely affect aquatic life, and impair the public recreational use and aesthetic enjoyment of surface waters. Section 13050(m) of the California Water Code defines a nuisance as anything that meets the following requirements: (1) Is injurious to health, or is indecent to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. (2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal. (3) Occurs during, or as the result of, the treatment or disposal of waste.
4. SSOs are a frequent occurrence in the portions of Orange County within the Santa Ana Region. The chief causes of sanitary sewer overflows in Orange County include grease blockages, root blockages, sewer line flood damage,

manhole structure failures, vandalism, pump station mechanical failures, power outages, storm or ground water inflow/infiltration, debris blockages, collection system age and construction material failures, lack of proper operation and maintenance, lack of capacity and contractor caused damages. Most of these SSOs are preventable with adequate and appropriate source control measures and operation and maintenance of the sewage collection system.

5. In Orange County, from January 1, 2000 through August 30, 2001, there were approximately 250 SSOs. SSOs from publicly owned sewage collection systems accounted for almost 75% of these sewage spills, with the remainder occurring on private property. On 31 occasions during this time period, beach waters were closed to body contact recreation resulting in a loss of 16.5 beach mile days (beach mile days = miles of beach X number of days of closure) of beneficial uses. Seventeen of these beach water closures were caused by sewage spills from systems owned by public agencies, and the other 14 closures resulted from sewage spills on private property that were not contained and resulted in a discharge to waters of the State. Areas where beach water was closed to body contact recreation include portions of Seal Beach, Sunset Beach, Huntington Beach, Newport Beach, Crystal Cove State Park, Newport Bay, and Huntington Harbor. Many of these SSOs that caused beach water closures also caused violations of water quality standards in other surface water bodies, such as the San Gabriel River, Coyote Creek, San Diego Creek and other surface water bodies in Orange County.
6. The beach water closures occur when sewage is present, and warnings are posted when any water quality standard is exceeded (postings). Therefore, warning signs are posted at storm drain outlets to the ocean during storm events along the beach (during the AB411 period April 1st through October 31st) otherwise a rainfall advisory is issued for all storms. During the January 1, 2000 through August 30, 2001 period, the Orange County Health Care Agency (OCHCA) also posted many of the same beach areas warning the public that concentrations of indicator bacteria at one of OCHCA's monitoring stations exceeded the State health standards. In addition to SSOs, urban runoff and storm water generally contain elevated levels of bacteria. Therefore, warning signs are posted at storm drain outlets to the ocean during storm events along the beach, and at outlets of creeks, streams and rivers. The OCHCA has posted notices of exceedances of water quality objectives that has resulted in 99.4 beach mile days of violations of water quality standards during January through August 2001.
7. A revised "Water Quality Control Plan for the Santa Ana River Basin (8)" (hereinafter Basin Plan) became effective on January 24, 1995. The Basin Plan designates beneficial uses, narrative and numerical water quality objectives, and prohibits certain types of discharges. The Basin Plan establishes body contact

recreation as a beneficial use of the Pacific Ocean and all surface water bodies within Orange County. The Basin Plan also includes a numeric water quality objective for coliform to protect and maintain this beneficial use. The coliform objective is specified as a 30-day geometric mean of no more than 200 MPN/100 ml of fecal coliform. The Basin Plan also includes, by reference, the California Ocean Plan standards for ocean waters in the Region.

8. The Basin Plan contains the following prohibition:

“The discharge of untreated sewage to any surface water stream, natural or man-made, or to any drainage system intended to convey storm water runoff to surface water streams, is prohibited.”
9. California Water Code Section 13243 provides that a Regional Board, in waste discharge requirements, may specify certain conditions or areas where the discharge of waste, or certain types of waste, is not permitted. The requirements specified in this order are consistent with the Basin Plan prohibition and Water Code Section 13243.
10. The issuance of a single general waste discharge requirement to the dischargers will:
 - a) Reduce the administrative burden of issuing individual waste discharge requirements to each discharger; and
 - b) Provide for a unified regional approach for the reporting and database tracking of sanitary sewer overflows.
 - c) To provide consistent and uniform standards of performance, operations, and maintenance of sewage collections systems.
11. This project involves a prohibition of discharge, and as such, is exempt from the provisions of the California Environmental Quality Act, in accordance with Title 14, California Administrative Code, Chapter 3, Section 15308.
12. The Regional Board has considered all water resource related environmental factors associated with this prohibition of discharge of waste.
13. The Regional Board has notified the dischargers and all known interested parties of the intent to prescribe waste discharge requirements to prohibit unauthorized discharges from sanitary sewer systems.
14. The Regional Board has, at a public meeting on December 7, 2001, heard and considered all comments pertaining to the terms and conditions of this Order.

IT IS HEREBY ORDERED, that the dischargers, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. PROHIBITIONS

1. The discharge of untreated sewage to any surface water stream, natural or man-made, or to any drainage system intended to convey storm water runoff to surface water streams, is prohibited. Neither the bypass nor the upset provisions at 40 CFR 122.41(m) and (n) apply to these discharges.

B. PROVISIONS

1. The discharger must comply with all conditions of this Order. Any noncompliance with this Order constitutes a violation of the California Water Code and is grounds for enforcement action.
2. Discharges Caused by Severe Natural Conditions – The Regional Board may take enforcement action against the permittee for any sanitary sewer system discharge caused by natural conditions, unless the permittee demonstrates through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (i) the discharge was caused by severe natural conditions (such as hurricanes, tornadoes, flooding, earthquakes, tsunamis, and other similar natural conditions);
 - (ii) there were no feasible alternatives to the discharge, such as retention of untreated wastewater, reduction of inflow and infiltration, use of adequate backup equipment, or an increase in the capacity of the system. This provision is not satisfied if, in the exercise of reasonable engineering judgment, the permittee should have installed auxiliary or additional collection system components, wastewater retention, adequate back-up equipment or should have reduced inflow and infiltration.
3. Discharges Caused by Other Factors - For SSOs other than those covered under this section, the permittee may establish an affirmative defense to an action brought for noncompliance if the permittee demonstrates through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (i) the permittee can identify the cause of the discharge event;

(ii) the discharge was exceptional, unintentional, temporary and caused by factors beyond the reasonable control of the permittee;

(iii) the discharge could not have been prevented by the exercise of reasonable control, such as proper management, operation and maintenance; adequate treatment facilities at OCSD's two regional treatment plants or collection system facilities or components (e.g., adequately enlarging treatment or collection facilities to accommodate growth or adequately controlling and preventing infiltration and inflow); preventive maintenance; or installation of adequate backup equipment; and

(iv) the permittee took all reasonable steps to stop, and mitigate the impact of, the discharge as soon as possible.

4. Burden of proof - In any enforcement proceeding, the permittee has the burden of proof to establish that the criteria in this section have been met.
5. In an enforcement action, it shall not be a defense for the discharger that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this Order.
6. Upon reduction, loss, or failure of the sanitary sewer system resulting in a sanitary sewer overflow, the discharger shall, to the extent necessary to maintain compliance with this Order, take any necessary remedial action to 1) control or limit the volume of sewage discharged, 2) terminate the sewage discharge as rapidly as possible, and 3) recover as much of the sewage discharged as possible for proper disposal, including any wash down water. The dischargers shall implement all remedial actions to the extent they may be applicable to the discharge, including the following:
 - a. Interception and rerouting of sewage flows around the sewage line failure;
 - b. Vacuum truck recovery of sanitary sewer overflows and wash down water;
 - c. Cleanup of debris of sewage origin at the overflow site.
7. The discharger shall properly fund, manage, operate and maintain, with adequately trained staff and/or contractors possessing adequate knowledge skills and abilities as demonstrated through a validated program at all times, all parts of the sewage collection system owned and/or operated by the discharger.

8. The discharger shall provide adequate capacity to convey base flows and peak flows, including wet weather related events, for all parts of the collection system owned or operated by the discharger.
9. The discharger shall take all feasible steps to stop, and mitigate the impact of, sanitary sewer overflows in portions of the collection system owned or operated by the discharger.
10. The discharger shall provide notification to the OCHCA and the Regional Board so that they can notify parties with a reasonable potential for exposure to pollutants associated with the SSO.
11. The discharger shall develop and implement a written plan, a Sewer System Management Plan (SSMP), for compliance with these waste discharge requirements and make it available to any member of the public upon request.
12. The essential elements of the SSMP are specified below. If the discharger believes that any element of this section is not appropriate or applicable for their SSMP program, the program does not need to address it, but the SSMP must explain why that element is not applicable. The Regional Board will consider the quality of the SSMP, its implementation and effectiveness in any relevant enforcement action, including, but not limited to, any enforcement action for violation of the Clean Water Act, the Basin Plan prohibition, or these waste discharge requirements. The SSMP must include the following components, with the exception of non-applicable components, as discussed above:

Sewer System Management Plan (SSMP)

(i) **Goals:** The main goal of the SSMP is to prevent SSOs and to provide a plan and schedule for measures to be implemented to prevent SSOs.

(ii) **Organization:** The SSMP must identify:

(A) Administrative and maintenance positions responsible for implementing measures in the SSMP program, including lines of authority by organization chart or similar document; and

(B) The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the Regional Water Quality Control Board, Orange County Health Care Agency, and State Office of Emergency Services (OES), if the discharge is 1,000 gallons or larger.

(iii) **Legal Authority:** The SSMP shall include legal authority, through sewer use ordinances, service agreements or other legally binding procedures, to:

- (A) Control infiltration and connections from inflow sources;
- (B) Require that sewers and connections be properly designed and constructed;
- (C) Ensure proper installation, testing, and inspection of new and rehabilitated sewers (such as new or rehabilitated collector sewers and new or rehabilitated service laterals);
- (D) Limit fats and greases and other debris which may cause blockages in the sewage collection system .
- (E) Implement the general and specific prohibitions of the national pretreatment program under 40 CFR 403.5.

(iv) **Measures and Activities.** In order to provide an adequate and appropriate SSO reduction plan, the SSMP must address the elements listed below that are appropriate and applicable to the discharger's system and identify the person or position in the organization responsible for each element:

- (A) Provide adequate operation and maintenance of facilities and equipment;
- (B) Maintain an up-to-date map of the collection system showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and stormwater conveyance facilities;
- (C) Maintain relevant information to establish and prioritize appropriate SSMP activities (such as the immediate elimination of dry weather overflows or overflows into sensitive waters, such as public drinking water supplies and their source waters, swimming beaches and waters where swimming occurs, shellfish beds, designated Outstanding National Resource Waters, National Marine Sanctuaries, waters within Federal, State, or local parks, and water containing threatened or endangered species or their habitat), and identify and illustrate trends in overflows, such as frequency and volume;
- (D) Routine preventive operation and maintenance activities by staff and contractors;
- (E) Establish a program to assess the current capacity of the collection system owned by the discharger or where the discharger has operational control;

including diversions of urban runoff to the sewer system and control of infiltration and intrusion;

(F) Identify and prioritize structural deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. This shall include a rehabilitation plan including schedules for the entire system;

(G) Provide training on a regular basis for staff in collection system operations, maintenance, and monitoring and determine if contractors' staff are appropriately trained;

(H) Provide equipment and replacement parts inventories, including identification of critical replacement parts.

(I) Establish an implementation plan and schedule for a public education outreach program that promotes proper disposal of grease and fats.

(J) Establish a plan for responding to SSOs from private property that discharge to public right of ways and storm drains, to prevent discharges from SSOs to surface waters and storm drains; and

(K) Develop a plan and a schedule for providing an analysis of alternative methods of disposal for grease and fats, and an implementations plan and schedule for providing adequate disposal capacity for grease and fats generated within the sewer system service area. This plan shall include an evaluation of the feasibility of using sludge digesters at the OCSD treatment plant for grease disposal and treatment, recycling, rendering, and other disposal alternatives.

(v) Design and Performance Provisions:

(A) Requirements and standards for the installation of new sewers, pumps and other appurtenances; and rehabilitation and repair projects; and

(B) Procedures and specifications for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

(vi) Monitoring, Measurement and Program Modifications

(A) Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;

(B) Update program elements, as appropriate, based on monitoring or performance evaluations; and

(C) Modify the summary of the SSMP program, as appropriate, to keep it updated and accurate and available for audit at all times.

(vii) **Overflow Emergency Response Plan** - The dischargers shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan should include the following:

(A) Ensure proper notification procedures so that the primary responders are informed of all SSOs in a timely manner (to the greatest extent possible)

(B) Ensure that all overflows (including those that do not discharge to waters of the State) are appropriately responded to, including ensuring that reports of overflows are immediately dispatched to appropriate personnel for investigation and appropriate response;

(C) Ensure immediate notification to the public, health agencies and other impacted entities (e.g., water suppliers) of all overflows. Report all SSOs to the Regional Water Quality Control Board and the Orange County Health Care Agency, and report to the State OES, if the overflow is 1,000 gallons or larger. The SSMP should identify the public health agency and other officials who will receive immediate notification;

(D) Ensure that appropriate staff and contractor personnel are aware of and follow the plan and are appropriately trained;

(E) Provide emergency operations; and

(F) Take all reasonable steps to contain sewage and prevent sewage discharges to surface waters and minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

(G) A plan for the use of portable aerators where complete recovery of the sanitary sewer overflows is not practicable and where severe oxygen depletion in existing surface waters is expected.

(viii) **Fats, Oils, and Grease Control Program:** Prepare and implement a grease, fat, and oil source control program to reduce the amount of these substances discharged to the sewer collection system. This plan shall include the legal authority to prohibit discharges to the system and identify measures to prevent SSOs caused by fats, oils, and grease blockages of sewers.

(A) The grease control program shall identify sections of the sewer system subject to grease blockages and the cleaning maintenance schedule for each section; and

(B) The program shall develop and implement source control measures, for all sources of grease and fats discharged to the sewer system, for each section identified in (A) above.

(ix) **System Evaluation and Capacity Assurance Plan:** Prepare and implement a plan to assure hydraulic capacity under peak flow conditions. At a minimum, the plan must include:

(A) **Evaluation:** Steps to evaluate those portions of the collection system which are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events;

(B) **Capacity Enhancement Measures:** Establish short- and long-term actions to address each hydraulic deficiency problem including prioritization, alternatives analysis, and schedules; and

(C) **Plan updates:** The plan must be updated, at a minimum annually, to describe any significant change in proposed actions and/or implementation schedules. The updates should include available information on the performance of measures that have been implemented.

(x) **SSMP Program Audits** - As part of the SSMP, the permittee shall conduct an audit, appropriate to the size of the system and the number of overflows, and submit a report of such audit, evaluating the SSMP and its compliance with this subsection, including its deficiencies and steps to respond to them.

(xi) **Communications:** - The discharger should communicate on a regular basis with interested parties on the implementation and performance of its SSMP. The

communication system should allow interested parties to provide input to the discharger as the program is developed and implemented.

11. The discharger shall develop and implement the SSMP according to the following schedule.

Sewer System Management Plan Time Schedule

Task	Completion Date
Monitoring and Reporting Program No. 01-99	Effective on Adoption
SSMP Development Plan and Schedule	May 1, 2002
SSO Emergency Response Plan	January 1, 2003
Legal Authority	January 1, 2004
Grease Disposal Alternatives	May 1, 2004
Grease Control Program	May 1, 2004
Capacity Evaluation	January 1, 2005
Sewer Rehabilitation Plan for Entire System	May 1, 2007
Final SSMP	May 1, 2007

C. PERMIT AVAILABILITY

1. A copy of this Order shall be maintained at appropriate locations and shall be available to sanitary sewer system operating and maintenance personnel at all times.

D. ENTRY AND INSPECTION

1. The discharger shall allow the Regional Board, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order;

- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
- d. Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the California Water Code, any substances or parameters at any location.

E. GENERAL MONITORING AND REPORTING REQUIREMENTS

- 1. The discharger shall furnish to the Executive Officer, within a reasonable time, any information which the Executive Officer may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The discharger shall also furnish to the Executive Officer, upon request, copies of records required to be kept by this Order.
- 2. Pursuant to California Water Code Section 13267(b), the discharger shall comply with the attached Monitoring and Reporting Program No.01-99 and future revisions thereto, as specified by the Executive Officer. Monitoring results shall be reported at the intervals specified in Monitoring and Reporting Program No.01-99.

F. CHANGE IN OWNERSHIP

- 1. This Order is not transferable to any person, except after notice to the Executive Officer. The discharger shall submit this notice in writing at least 30 days in advance of any proposed transfer. The notice must include a written agreement between the existing and new discharger containing a specific date for the transfer of this Order's responsibility and coverage between the existing discharger and the new discharger. This agreement shall include an acknowledgement that the existing discharger is liable for violations up to the transfer date and that the new discharger is liable from the transfer date on.

G. INCOMPLETE REPORTS

- 1. Where the discharger becomes aware that it failed to submit to the Regional Board any relevant facts in any report required under this Order, it shall promptly submit such facts or information.

H. REPORT DECLARATION

1. All applications, reports, or information (except for 24 hour Sanitary Sewer Overflow Reports) submitted to the Executive Officer shall be signed and certified as follows:
 - a. All reports, including disks, (except for preliminary Sanitary Sewer Overflow Reports submitted as soon as possible) required by this Order and other information required by the Executive Officer shall be signed and certified by a person designated, for a municipality, state, federal or other public agency, by either a principal executive officer or ranking elected official, or by a duly authorized representative of that person, as described in paragraph b. of this provision.
 - b. An individual is a duly authorized representative only if:
 - (1) The authorization is made in writing by a person described in paragraph a. of this provision;
 - (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity; and
 - (3) The written authorization is submitted to the Executive Officer.
 - c. Any person signing a document under this provision shall make the following certification:

"I swear under penalty of perjury that the information submitted in this document is true and correct. I certify under penalty of perjury that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

I. REGIONAL BOARD ADDRESS

1. The discharger shall submit reports required under this Order, or other information required by the Executive Officer, to:

Executive Officer
Santa Ana Regional Board
3737 Main Street, Suite 500
Riverside, CA 92501-3348
Phone No.(909-) 782-4130
Fax No.(909) 781-6288

J. CIVIL MONETARY REMEDIES FOR DISCHARGE VIOLATIONS

1. The California Water Code provides that any person who violates this Order is subject to civil monetary remedies.
2. The California Water Code also provides that any person failing or refusing to furnish technical or monitoring program reports, as required under this Order, or falsifying any information provided in the technical or monitoring reports is also subject to a civil monetary penalties.

K. SEVERABILITY

1. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.
2. This order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the discharger from liability under federal, state or local laws, nor create a vested right for the discharger to continue the waste discharge.

L. ORDER

1. This order becomes effective on the date of adoption by the Regional Board. This order and monitoring and reporting program supersedes all reporting requirements for sanitary sewer overflows at any point upstream of the sewage treatment plant for agencies and facilities with waste discharge requirements, as listed in the attached Table A.

I, Gerard J. Thibeault, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on ??.

Gerard J. Thibeault
Executive Officer

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION**

**TENTATIVE MONITORING AND REPORTING PROGRAM NO. 01-99
FOR GENERAL WASTE DISCHARGE REQUIREMENTS
FOR
SEWAGE COLLECTION AGENCIES
IN ORANGE COUNTY**

This Monitoring and Reporting Program (MRP) establishes monitoring, recordkeeping, reporting and public notification requirements for Order No. 01-99, "General Waste Discharge Requirements for Sewage Collection Agencies in Orange County within the Santa Ana Region." Revisions to this MRP may be made at any time by the Executive Officer, and may include a reduction or increase in the monitoring and reporting.

A. DEFINITIONS

1. **Sanitary Sewer Overflow** - A sanitary sewer overflow (SSO) is any overflow, spill, release, discharge or diversion of wastewater from a sanitary sewer system. SSOs include:
 - (i) overflows or releases of wastewater that reach waters of the United States;
 - (ii) overflows or releases of wastewater that do not reach waters of the United States; and
 - (iii) wastewater backups into buildings and on private property that are caused by blockages or flow conditions in a sanitary sewer, other than a building lateral. Wastewater backups into buildings caused by a blockage or other malfunction of a building lateral that is privately owned is a SSO when sewage is discharged off of private property into streets, stormdrains, or waters of the State.
2. **Sanitary Sewer System** – Any system of pipes, pump stations, sewers, etc., used to collect and convey sewage to a treatment plant.

B. MONITORING PROVISIONS

1. Monitoring results must be reported on discharge monitoring report forms approved by the Executive Officer.
2. Records shall be maintained by the discharger for a minimum of five years from the date of the sample, measurement, report or application. This period may be

extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

3. All records shall be made available for review upon RWQCB staff's request.
4. The discharger shall retain records of all SSOs, including, but not limited to:
 - a. All calibration and maintenance records. All monitoring instruments and devices that are used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy;
 - b. All original strip chart recordings for continuous monitoring instrumentation;
 - c. Spill prevention plan;
 - d. Service call records and complaint logs of calls received by the discharger;
 - e. Spill calls;
 - f. Spill records;
 - g. Copies of all reports required by this Order.
 - h. The location of the overflow and the receiving water if any;
 - i. An estimate of the volume of the overflow;
 - j. A description of the sewer system component from which the release occurred (e.g., manhole, constructed overflow pipe, crack in pipe);
 - k. The estimated date and time when the overflow began and when it stopped;
 - l. The cause or suspected cause of the overflow;
 - m. Steps that have been and will be taken to prevent the overflow from recurring and a schedule for those steps.
 - n. Work orders from the previous 3 years which are associated with responses and investigations of system problems related to sanitary sewer overflows;
 - o. A list and description of complaints from customers or others from the previous 3 years; and
 - p. Documentation of performance and implementation measures for the previous 3 years.
5. Records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) analyses were performed;
 - d. The individual(s) who performed the analyses;
 - e. The analytical technique or method used; and,
 - f. The results of such analysis.

6. All monitoring reports shall be signed by an authorized person as required by Provision No. G.18.

C. SANITARY SEWER OVERFLOW REPORTING

1. All discharges of sewage that occur from the discharger's sanitary sewer system shall be reported to the Regional Board. The discharger shall report all SSOs to the Regional Board by telephone, voice mail, e-mail, or FAX, as soon as possible, but no later than 24 hours, that:

- i) The discharger has knowledge of a sanitary sewage overflow;
- ii) Notification is possible; and
- iii) Notification can be provided without substantially impeding cleanup or other emergency measures.

Regional Board office hours are between the hours of 8:00 a.m. to 5:00 p.m., Monday through Friday, excluding state holidays. Regional Board voice mail and Fax machine are on-line 24 hours a day, 7 days a week. Regional Board office has voice mail to enable 24 hour/7 days a week reporting at (909) 782-4130. Fax Number is (909) 781-6288.

2. The discharger shall report all SSOs using the attached Sanitary Sewer Overflow Report Form, or equivalent. The information reported to the Regional Board in the initial telephone, voice mail, FAX, or e-mail report shall include:
 - a. The name and phone number of the person reporting the sanitary sewer overflow;
 - b. The responsible sanitary sewer system agency;
 - c. An estimated date and time when the overflow began and when it stopped;
 - d. Whether the sewage discharged to a storm drain or surface water body, how the spill was contained and treated, and how wash waters were disposed;
 - e. The estimated total sewer overflow volume, along with a description of how the volume was tabulated. (The discharger shall take a photograph of the SSO for submittal as part of the quarterly report).
 - f. How much of the spilled sewage was returned to the system and how much of the wash waters and any water that has come into contact with the spilled sewage was returned to the sanitary sewer

and how much sewage, wash water, and sewage contaminated water was discharged to waters of the State.

- g. The location of the overflow and the location of the potential blockage or problem point. A description of the sewer system component from which the spill occurred. (e.g. manhole, constructed overflow pipe, crack in pipe);
 - h. The cause or suspected cause of the overflow;
 - i. The receiving waters nearby and whether the spill reached the receiving waters. Also, describe the number of storm drains downstream of the spill and the number, if any, where the spill entered into the storm drain inlet;
 - j. A notation of whether or not the sewer overflow is still occurring at the time of the report;
 - k. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps; and,
 - l. Confirmation that the local health services agency was or will be notified as required under the reporting requirements of the local health services agency.
- 3. Sanitary sewer overflows to storm drains tributary to Waters of the United States shall be reported as discharges to surface waters.
 - 4. The public must be notified for all overflows in areas where overflows have a potential to affect human health. The criteria for notification should be developed in consultation with potentially affected entities. The notice should be in accordance with the SSMP overflow response plan implemented in the city of the spill. The notice should be in accordance with the SSMP and overflow emergency response plan.
 - 5. The Discharger shall report all sanitary sewer overflows greater than 1,000 gallons to the Office of Emergency Services (OES), in accordance with California Water Code Section 13271.

Office of Emergency Services
Phone (800) 825-7550
Use the Fax for follow-up only.
Fax (916) 262-1677

6. The discharger shall submit quarterly reports of all SSOs. The quarterly report shall provide the following information for each SSO.
 - a. The location of the overflow;
 - b. The receiving water (if there is one);
 - c. An estimate of the volume of the overflow;
 - d. A description of the sewer system component from which the release occurred (e.g., manhole, constructed overflow pipe, crack in pipe);
 - e. The estimated date and time when the overflow began and stopped or will be stopped;
 - f. The cause or suspected cause of the overflow;
 - g. Steps taken or planned to reduce, eliminate, and prevent recurrence of the overflow and a schedule of major milestones for those steps;
 - h. Steps taken or planned to mitigate the impact(s) of the overflow and a schedule of major milestones for those steps.
 - i. Complete a copy of the Sanitary Sewer Overflow Form attached to Monitoring and Reporting Program No. 01-99, and submit the completed Sanitary Sewer Overflow Report form, along with any additional correspondence, and,
 - j. Additional correspondence and follow-up reports should be submitted to the Regional Board, as necessary, to supplement the Sanitary Sewer Overflow Report Form to provide detailed information on cause, response, adverse effects, corrective actions, preventative measures, or other information.
 - k. Enter the data on a computer disk or spreadsheet attachment to e-mail in the format described below for submission to the Regional Board at the end of the quarter.
 - l. An IBM-PC DOS compatible floppy disk or e-mail (with an attached Excel file), containing the data described below on all sanitary sewer overflows for the quarter shall be submitted quarterly with a certification statement described in Provision No. G.18 of Order 01-99.
 - m. The disk shall be 3 1/2 inch, double sided, high density formatted for 1.44 MB. The information submitted shall be fully compatible with Microsoft EXCEL version 5.0. In order to safeguard the integrity of the information submitted on disk against errors caused by accidental changes, all information should be write protected. This can be done with Microsoft EXCEL version 5.0 by choosing "Protection" from Tools Menu, and choosing "Protect Sheet". If more than one sheet is created, protect every sheet with the same password. Any form of data protection may be used which will allow Regional Board staff to open the file and copy the data to a new file. This procedure will safeguard the integrity of information submitted on computer disk to the Regional Board. An EXCEL template of the database will be supplied.
 - n. The disk shall be labeled with:

- a. The dischargers name;
 - b. Monitoring and Reporting Program No.01-99;
 - c. The quarter and the year; and,
 - d. The software format.
 - o. Each sanitary sewer overflow shall be reported in a separate record in the file. Nonnumeric Data shall be entered in capital and lower case letters.
 - p. The required fields for each record shall be in a format compatible with the SWRCB's SSO data base.
7. A statement certifying that there were no sanitary sewer overflows for the quarter and the certification statement described in Reporting and Record Keeping Requirement C.7 of Order 01-99 may be submitted in lieu of a floppy disk.
8. Sanitary Sewer Overflow Summary Reports and certification statements shall be submitted to the Executive Officer in accordance with the following schedule:

<u>Reporting Frequency</u>	<u>Report Period</u>	<u>Report Due</u>
Quarterly	January – March	April 30
	April – June	July 30
	July – September	October 30
	October – December	January 30

The first quarterly summary report will be due July 30, 2002, for spills occurring during January –March 2002. Reports will be due quarterly thereafter.

9. The quarterly report shall identify all sanitary sewer overflows that discharge to waters of the United States, including the following information:
- (i) the total number of system overflows that discharge to waters of the United States that occurred during the reporting period;
 - (ii) the number of locations at which sanitary sewer overflows that discharge to waters of the United States occurred during the reporting period that resulted from flows exceeding the capacity of the collection system;
 - (iii) the number of sanitary sewer overflows that discharge to waters of the United States that are unrelated to the capacity of the collection system that occurred during the reporting period; and
 - (iv) the number of locations at which sanitary sewer overflows that discharge to waters of the United States that occurred during the reporting period that are unrelated to the capacity of the collection system.

10. The discharger shall report SSOs resulting from pipe breaks, leaking sewer pipes and joints, and other subsurface discharges of sewage as part of the sewer system audit, and in the quarterly reports thereafter. Subsurface discharges of sewages, that reach the ground surface, shall be reported immediately, in accordance with C.1.
11. Monitoring and Reporting Program No. 01-99 is effective as of ??.

Ordered by: _____
Gerard Thibeault
Executive Officer

Dated:

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION**

SANITARY SEWER OVERFLOW REPORT FORM

09/19/01

ALL ITEMS ARE REQUIRED TO BE ADDRESSED.

1. THIS REPORT IS (CIRCLE ONE): PRELIMINARY FINAL
- REVISED FINAL
2. SANITARY SEWER OVERFLOW SEQUENTIAL TRACKING NUMBER:
- _____
3. REPORTED TO: _____
(ENTER FAX, VOICE MAIL, OR NAME OF REGIONAL BOARD STAFF)
4. DATE REPORTED: ____ / ____ / ____ (MM/DD/YY)
- TIME REPORTED: ____ : ____ (MILITARY OR 24 HOUR TIME)
5. REPORTED BY: _____
6. PHONE: (____) ____ - ____
7. REPORTING SEWER AGENCY: _____
8. RESPONSIBLE SEWER AGENCY: _____
9. OVERFLOW START: DATE: ____ / ____ / ____ (MM/DD/YY)
- TIME: ____ : ____ (MILITARY OR 24 HOUR TIME)
- 10.OVERFLOW END: DATE: ____ / ____ / ____ (MM/DD/YY)
- TIME: ____ : ____ (MILITARY OR 24 HOUR TIME)
- 11.ESTIMATED OVERFLOW FLOW RATE: _____ (GALLONS PER
MINUTE)

12. TOTAL OVERFLOW VOLUME: _____ (GALLONS)

13. DESCRIPTION OF HOW VOLUME WAS DETERMINED/CALCULATED, ATTACH PHOTOGRAPH(S)/DIAGRAM(S):

14. OVERFLOW VOLUME RECOVERED: _____ (GALLONS)

15. OVERFLOW VOLUME RELEASED TO ENVIRONMENT: _____ (GALLONS)

SANITARY SEWER OVERFLOW LOCATION AND DESCRIPTION:

16. STREET: _____

CITY: _____ ZIP CODE: _____

17. COUNTY: ____ (SB, RV, OR)

18. SANITARY SEWER OVERFLOW STRUCTURE I.D.:

19. NUMBER OF OVERFLOWS WITHIN 1000 FT. OF THIS LOCATION IN PAST 12 MONTHS _____

20. DATES OF OVERFLOWS WITHIN 1000 FT OF THIS LOCATION IN PAST 12 MONTHS _____

21. OVERFLOW CAUSE --SHORT DESCRIPTION -- CIRCLE ONE

ROOTS

GREASE

LINE BREAK

INFILTRATION

ROCKS

BLOCKAGE

POWER FAILURE

PUMP STATION

FAILURE

DEBRIS	VANDALISM	FLOOD DAMAGE	MANHOLE FAILURE
OTHER	UNKNOWN	CONSTRUCTION	PRIVATE PROPERTY

22. OVERFLOW CAUSE -- DETAILED DESCRIPTION OF CAUSE

23. SANITARY SEWER OVERFLOW CORRECTION -- DESCRIPTION OF ALL PREVENTATIVE AND CORRECTIVE MEASURES TAKEN OR PLANNED.

24. WAS THERE MEASURABLE PRECIPITATION DURING 72-HOUR PERIOD PRIOR TO THE OVERFLOW? ____ (Y OR N)

INITIAL AND SECONDARY RECEIVING WATERS:

25. DID THE SANITARY SEWER OVERFLOW ENTER A STORM DRAIN? ____
(Y OR N)

26. DID THE SANITARY SEWER OVERFLOW REACH SURFACE WATERS

OTHER THAN A STORM DRAIN? ____ (Y OR N)

27. NAME OR DESCRIPTION OF INITIAL RECEIVING WATERS. (IF NONE, TYPE NONE)

28. NAME OR DESCRIPTION OF SECONDARY RECEIVING WATERS. (IF NONE, TYPE NONE)

29. IF THE SANITARY SEWER OVERFLOW DID NOT REACH SURFACE WATERS, DESCRIBE THE FINAL DESTINATION OF SEWAGE.

NOTIFICATION:

30. WAS THE LOCAL HEALTH SERVICES AGENCY NOTIFIED? ____ (Y OR N)

31. IF THE OVERFLOW WAS OVER 1,000 GALLONS, WAS THE OFFICE OF EMERGENCY

SERVICES (OES) NOTIFIED? ____ (Y or N) (NOT APPLICABLE, ENTER NA)

AFFECTED AREA POSTING:

32. WERE SIGNS POSTED TO WARN OF CONTAMINATION? ____ (Y OR N)

33. LOCATION OF POSTING (IF POSTED): _____

34. HOW MANY DAYS WERE THE WARNING SIGNS POSTED? _____

35. WERE SAMPLES OBTAINED OF CONTAMINATED WATER? (ATTACH RESULTS)

36. REMARKS:
